



Customer
 Producer of absorbent pads for oil cleanups

Industry
 Oil, Gas & Petrochemical

Application
 Shredder cutter wheel drive

Rexnord Solution:
 Autogard Torque Limiter 200 Series

Total Annual Savings
 \$161,846



For a detailed cost analysis for your application, contact your local Rexnord Representative.

Autogard torque limiter saves company, cuts broken belts from 200 to 0.

Challenge

A major producer of meltblown sorbents converts them into absorbent pads used for oil spill cleanups. This situation involved a rotary cutter wheel that trimmed the meltblown material. The cutter wheel was being driven by a timing belt and sheave.

The problem stemmed from jam-ups that occurred as the meltblown material was slit, perforated and cut by the cutter. Occasionally, material would build up on the blades, eventually causing the cutter to jam up and break the belt.

After a major oil spill, the company received orders to ship as much as they could make. With shifts running 24 hours a day, 7 days a week, downtime was not an option – yet constant belt drive replacements proved otherwise.

The belts were breaking about four times a week on each line. To further compound the situation, when a belt broke, the meltblown material continued to feed in at 100 fpm until the line could be shut down. Until then, the material piled up on the floor and had to be reprocessed or scrapped.



Meltblown material piled up when belts broke due to jam-ups.

Rexnord Solution

A Rexnord Autogard torque limiter was attached to the company's existing sheave, which required only minor modification to accept the torque limiter.

The torque limiter serves as a mechanical "fuse" that disengages the equipment to protect it from damage when jam-ups occur.

The torque limiter provides precise and complete disengagement at the required torque. After tripping, it features extremely low residual torque. Easy to install and maintain, the Autogard torque limiter provides accurate repeatability and offers either automatic, manual or timed re-engagement.



Close up of the Autogard torque limiter.

Rexnord Solutions and Savings in Action

Since installing the Autogard torque limiter, the customer has experienced:

- **Savings in belt replacement costs** – Belt replacement reduced to zero, other than routine maintenance once per year.
- **Savings in maintenance costs** – No more labor required to replace broken belts.
- **Savings in production** – 50% less scrap produced.
- **Savings in uptime** – Two years running without a single belt break.



Calculating Total Cost of Ownership (TCO)

Rexnord worked with the customer to determine their current cost of ownership and compared that to the cost of the Rexnord solution. Factors considered were:

- Labor and material costs for each belt replacement
- The replacement frequency
- Unplanned downtime costs (dollars per hour)

Annual Cost Analysis Breakdown

Belt Removal and Installation

Based on 200 belt breakages per year.

2 people, 1/2 hour each (\$25/hr)	\$5,000
Cost per belt (\$88 each)	\$17,600
Total Savings	\$ 22,600

Lost Production

Half hour downtime per belt breakage event.

1/2 hour x 200 events per year x \$1,400 per hour	\$140,000
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Total Current Annual TCO \$162,600

All the cost above were eliminated by the Autogard torque limiter

Cost of Solution

Purchase and Installation of the Autogard Torque Limiters

Annualized based on 8 year expected life.

Labor	\$6
Materials	\$748
Annualized Cost	\$754

Rexnord Solution Annual Savings Summary

Total current cost	\$162,600
Total proposed cost	\$754
Total savings per year	\$161,846
TCO reduction percent	99.5%

Total Cost of Ownership Annual Savings: \$161,846